

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

**BE Labs, Inc.,**

Plaintiff,

v.

**ASUSTeK Computer Inc.,**

Defendant.

Case No. 6:23-cv-00056-FB

Patent Case

Jury Trial Demanded

**AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

1. Plaintiff BE Labs, Inc. (“Plaintiff”), through its attorneys, complains of ASUSTeK Computer Inc. (“Defendant”), and alleges the following:

**PARTIES**

2. Plaintiff BE Labs, Inc. is a corporation organized and existing under the laws of New York that maintains its principal place of business at 1285 Greenbriar Lane, North Belmore, NY 11710.

3. Defendant ASUSTeK Computer Inc. is a corporation organized and existing under the laws of Taiwan that maintains an established place of business at No. 15, Li-Te Rd., Beitou District, Taipei 112, Taiwan.

**JURISDICTION**

4. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

5. This Court has exclusive subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over Defendant because it has engaged in systematic and continuous business activities in this District. As described below, Defendant has committed acts of patent infringement giving rise to this action within this District.

#### **VENUE**

7. Venue is proper in this District under 28 U.S.C. § 1391(c) because Defendant is a foreign corporation. In addition, Defendant has committed acts of patent infringement in this District, and Plaintiff has suffered harm in this district.

#### **PATENTS-IN-SUIT**

8. Plaintiff is the assignee of all right, title and interest in United States Patent Nos. 7,827,581; and 9,344,183 (the “Patents-in-Suit”); including all rights to enforce and prosecute actions for infringement and to collect damages for all relevant times against infringers of the Patents-in-Suit. Accordingly, Plaintiff possesses the exclusive right and standing to prosecute the present action for infringement of the Patents-in-Suit by Defendant.

#### **THE ’581 PATENT**

9. The ’581 Patent is entitled “Wireless multimedia system,” and issued 2010-11-02. The application leading to the ’581 Patent was filed on 2001-02-28. A true and correct copy of the ’581 Patent is attached hereto as Exhibit 1 and incorporated herein by reference.

#### **THE ’183 PATENT**

10. The ’183 Patent is entitled “Wireless multimedia system,” and issued 2016-05-17. The application leading to the ’183 Patent was filed on 2010-10-01. A true and correct copy of the ’183 Patent is attached hereto as Exhibit 2 and incorporated herein by reference.

**THE ASSERTED CLAIMS OF BOTH PATENTS ADDRESS A SPECIFIC PROBLEM IN THE PRIOR ART WITH TECHNICAL SOLUTIONS AND THEREBY EMBODY INVENTIVE CONCEPTS**

**The '581 Patent**

11. Claim 1 is directed to a system for distributing orthogonal frequency division multiplexing (OFDM) signals carrying multimedia information throughout a multi-room building to multiple end units. *See* '581 Patent, claim 1. Dependent claim 6 further limits the system of claim 1 to being a modular system. *See id.*, claim 6. Claim 28 adds the limitation that the OFDM signal transmissions are spatially directed to the end units. *See id.*, claim 28. A differentiating feature of claim 28 is that it requires directionality to the transmissions made from the system.

12. A key inventive aspect of claim 1 is that it requires the system to be able to transmit broadcast traffic (e.g. video streaming) and other traffic (e.g. data communications, voice etc.) separately. *See* '581 Patent, claim 1. This requirement is satisfied by multiple-user (MU) multiple-input multiple-output (MIMO) technology, which enables multiple types of traffic to be carried in the same transmission, via a multi-user data frame. *See*

Home networking: Everything you need to know <https://www.cnet.com/how-to/home-networking-explained-part-1-heres-the-url-for-you/>

802.11ac A Survival Guide, Chapter 4: Beamforming in 802.11ac  
<http://chimera.labs.oreilly.com/books/1234000001739/ch04.html>

**The '183 Patent**

13. Claim 1 is directed to a system for distributing orthogonal frequency division multiplexing (OFDM) signals carrying multimedia information throughout a multi-room building to multiple end units. *See* '183 Patent, claim 1. A key aspect of the claim that differentiates it from earlier versions of the 802.11 standard (a/b/g) is it requires transmission in multiple directions to multiple end units. *See* 802.11ac A Survival Guide, Chapter 4:

Beamforming in 802.11ac <http://chimera.labs.oreilly.com/books/1234000001739/ch04.html>.

This function is supported by multiple-input multiple-output (MIMO) technology, which was introduced in 2009 by 802.11n and later improved in 2013 by 802.11ac. *See* IEEE Std 802.11n-2009 and IEEE Std 802.11ac-2013. Future versions of the 802.11 standard will also use MIMO technology.

**The claims of both patents capture inventive concepts**

14. MU-MIMO was first introduced by 802.11ac in 2013. The capability was first introduced in 802.11n in 2009, and later improved in 802.11ac. In 2009, IEEE 802.11n introduced MIMO directed beamforming techniques, which supported maximum of four space-time streams per transmission. This feature provided the capability to direct transmissions to one or more diversely located end units. IEEE 802.11ac increases the maximum number of space-time streams to eight. *See* IEEE Std 802.11n-2009 and IEEE Std 802.11ac-2013. *See* 802.11ac A Survival Guide, Chapter 4: Beamforming in 802.11ac <http://chimera.labs.oreilly.com/books/1234000001739/ch04.html>.

15. With a priority date of February 29, 2000, the Asserted Patents predate the standard by 13 years. The standard uses orthogonal frequency division multiplexing as well as multiple-input multiple-output (MIMO) technology both of which compensate for multi-path transmission effects that occur from radio frequency (RF) line of sight (LOS) and RF non-LOS transmission paths, such as occur in multi-room buildings.

16. OFDM technology provides adequate symbol width and guard intervals so as to alleviate inter symbol interference (ISI) effects such as can occur due to multi-path, reflection and absorption phase induced losses. *See* MIMO-OFDM <https://en.wikipedia.org/wiki/MIMO-OFDM>. When using broadcast/multicast transmission, 802.11ac routers and access points do not

expect acknowledgement (ACK) messages from the end-users' devices upon the successful reception of packets. *See* 802.11 Wireless Networks: The Definitive Guide, 2nd Edition, Chapter 4, 802.11 Framing in Detail <https://www.safaribooksonline.com/library/view/80211-wireless-networks/0596100523/ch04.html> and IEEE Std 802.11n-2009.

#### COUNT 1: INFRINGEMENT OF THE '581 PATENT

17. Plaintiff incorporates the above paragraphs herein by reference.

18. **Direct Infringement.** Defendant has been and continues to directly infringe one or more claims of the '581 Patent in at least this District by making, using, offering to sell, selling and/or importing, without limitation, at least the Defendant products identified in the charts incorporated into this Count below (among the "Exemplary Defendant Products") that infringe at least the exemplary claims of the '581 Patent also identified in the charts incorporated into this Count below (the "Exemplary '581 Patent Claims") literally or by the doctrine of equivalents. On information and belief, numerous other devices that infringe the claims of the '581 Patent have been made, used, sold, imported, and offered for sale by Defendant and/or its customers.

19. Defendant also has and continues to directly infringe, literally or under the doctrine of equivalents, the Exemplary '581 Patent Claims, by having its employees internally test and use these Exemplary Products.

20. **Actual Knowledge of Infringement.** The service of the Original Complaint on 10/20/20, in conjunction with the attached claim charts and references cited, constitutes actual knowledge of infringement as alleged here.

21. Despite such actual knowledge, Defendant continues to make, use, test, sell, offer for sale, market, and/or import into the United States, products that infringe the '581 Patent. On

information and belief, Defendant has also continued to sell the Exemplary Defendant Products and distribute product literature and website materials inducing end users and others to use its products in the customary and intended manner that infringes the '581 Patent. See Exhibit 3 (extensively referencing these materials to demonstrate how they direct end users to commit patent infringement).

22. **Induced Infringement.** At least since being served by the Original Complaint and corresponding claim charts, Defendant has actively, knowingly, and intentionally continued to induce infringement of the '581 Patent, literally or by the doctrine of equivalents, by selling Exemplary Defendant Products to their customers for use in end-user products in a manner that infringes one or more claims of the '581 Patent.

23. Exhibit 3 includes charts comparing the Exemplary '581 Patent Claims to the Exemplary Defendant Products. As set forth in these charts, the Exemplary Defendant Products practice the technology claimed by the '581 Patent. Accordingly, the Exemplary Defendant Products incorporated in these charts satisfy all elements of the Exemplary '581 Patent Claims.

24. Plaintiff therefore incorporates by reference in its allegations herein the claim charts of Exhibit 3.

25. Plaintiff is entitled to recover damages adequate to compensate for Defendant's infringement.

## **COUNT 2: INFRINGEMENT OF THE '183 PATENT**

26. Plaintiff incorporates the above paragraphs herein by reference.

27. **Direct Infringement.** Defendant has been and continues to directly infringe one or more claims of the '183 Patent in at least this District by making, using, offering to sell, selling and/or importing, without limitation, at least the Defendant products identified in the

charts incorporated into this Count below (among the “Exemplary Defendant Products”) that infringe at least the exemplary claims of the ’183 Patent also identified in the charts incorporated into this Count below (the “Exemplary ’183 Patent Claims”) literally or by the doctrine of equivalents. On information and belief, numerous other devices that infringe the claims of the ’183 Patent have been made, used, sold, imported, and offered for sale by Defendant and/or its customers.

28. Defendant also has and continues to directly infringe, literally or under the doctrine of equivalents, the Exemplary ’183 Patent Claims, by having its employees internally test and use these Exemplary Products.

29. **Actual Knowledge of Infringement.** The service of the Original Complaint on 10/20/20, in conjunction with the attached claim charts and references cited, constitutes actual knowledge of infringement as alleged here.

30. Despite such actual knowledge, Defendant continues to make, use, test, sell, offer for sale, market, and/or import into the United States, products that infringe the ’183 Patent. On information and belief, Defendant has also continued to sell the Exemplary Defendant Products and distribute product literature and website materials inducing end users and others to use its products in the customary and intended manner that infringes the ’183 Patent. *See* Exhibit 4 (extensively referencing these materials to demonstrate how they direct end users to commit patent infringement).

31. **Induced Infringement.** At least since being served by the Original Complaint and corresponding claim charts, Defendant has actively, knowingly, and intentionally continued to induce infringement of the ’183 Patent, literally or by the doctrine of equivalents, by selling

Exemplary Defendant Products to their customers for use in end-user products in a manner that infringes one or more claims of the '183 Patent.

32. Exhibit 4 includes charts comparing the Exemplary '183 Patent Claims to the Exemplary Defendant Products. As set forth in these charts, the Exemplary Defendant Products practice the technology claimed by the '183 Patent. Accordingly, the Exemplary Defendant Products incorporated in these charts satisfy all elements of the Exemplary '183 Patent Claims.

33. Plaintiff therefore incorporates by reference in its allegations herein the claim charts of Exhibit 4.

34. Plaintiff is entitled to recover damages adequate to compensate for Defendant's infringement.

#### **JURY DEMAND**

35. Under Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff respectfully requests a trial by jury on all issues so triable.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests the following relief:

- A. A judgment that the '581 Patent is valid and enforceable
- B. A judgment that Defendant has infringed directly and indirectly one or more claims of the '581 Patent;
- C. A judgment that the '183 Patent is valid and enforceable
- D. A judgment that Defendant has infringed directly and indirectly one or more claims of the '183 Patent;
- E. An accounting of all damages not presented at trial;



- F. A judgment that awards Plaintiff all appropriate damages under 35 U.S.C. § 284 for Defendant's continuing or future infringement, up until the date such judgment is entered with respect to the '581; and '183 Patents, including pre- or post-judgment interest, costs, and disbursements as justified under 35 U.S.C. § 284;
- G. And, if necessary, to adequately compensate Plaintiff for Defendant's infringement, an accounting:
- i. that this case be declared exceptional within the meaning of 35 U.S.C. § 285 and that Plaintiff be awarded its reasonable attorneys fees against Defendant that it incurs in prosecuting this action;
  - ii. that Plaintiff be awarded costs, and expenses that it incurs in prosecuting this action; and
  - iii. that Plaintiff be awarded such further relief at law or in equity as the Court deems just and proper.

Dated: February 22, 2023

Respectfully submitted,

/s/ Isaac Rabicoff  
Isaac Rabicoff  
Rabicoff Law LLC  
5680 King Centre Dr, Suite 645  
Alexandria, VA 22315  
7736694590  
isaac@rabilaw.com

**Counsel for Plaintiff  
BE Labs, Inc.**